

AMENDMENTS

In the Claims:

Claims 1-35. (cancelled).

Claim 36. (currently amended) A method for simultaneously enriching tumor cells and depleting unwanted blood cells from a body fluid, comprising

- (a) centrifuging in a centrifugation vessel a cell separation medium overlaid with said body fluid, wherein said cell separation medium has a density in the range of from 1.055 to 1.065 g/ml, and wherein said centrifugation vessel is divided into an upper compartment and a lower compartment, and
- (b) introducing said cell separation medium into said lower compartment and said body fluid into said upper compartment, wherein said upper and lower compartments are divided by a porous barrier, filter, sieve, or flap, wherein ~~said flap comprises an outer edge and said flap opens into said lower compartment from the outer edge and is closed in the state when the centrifugation is at rest and open during centrifugation~~ is a disk, wherein said disk is bent by centrifugation on two sides across a transverse strut.

Claim 37. (previously presented) The method of claim 36, wherein said cell separation medium has a density in the range of from 1.059 to 1.062 g/ml.

Claim 38. (previously presented) The method of claim 36, wherein said cell separation medium has a density of about 1.060 g/ml.

Claim 39. (previously presented) The method of claim 36, wherein said centrifuging is carried out at about 500 to 2000 x g for about 10 to 30 minutes.

Claim 40. (previously presented) The method of claim 36, wherein said centrifuging is carried out at about 1000 x g for about 20 to 30 minutes.

Claim 41. (previously presented) The method of claim 36, wherein said cell separation medium is selected from the group consisting of PERCOLL™ and FICOLL™.

Claim 42. (previously presented) The method of claim 36, wherein said body fluid comprises one or more substances which prevent aggregation of platelets onto tumor cells.

Claim 43. (previously presented) The method of claim 36, wherein said body fluid has been treated to remove substances which promote aggregation of platelets onto tumor cells.

Claim 44. (previously presented) The method of claim 36, wherein said body fluid is peripheral blood.

Claim 45. (previously presented) The method of claim 36, wherein said body fluid is peripheral blood mixed with an anticoagulant substance and diluted with a diluting medium.

Claim 46. (previously presented) The method of claim 44, wherein said peripheral blood is venous or arterial blood.

Claim 47. (previously presented) The method of claim 36, wherein said body fluid is selected from the group consisting of lymph, urine, exudates, transudates, spinal fluid, seminal fluid, saliva, fluids from natural or unnatural body cavities, bone marrow, and dispersed body tissue.

Claim 48. (previously presented) The method of claim 36, further comprising cooling a lower portion of said centrifugation vessel after said centrifuging and before removing an interphase enriched in tumor cells.

Claims 49-50 (cancelled).

Claim 51. (previously presented) The method of claim 36, wherein said porous barrier, filter, sieve, or flap has a thickness of 0.5-10 mm.

Claim 52. (previously presented) The method of claim 36, wherein said porous barrier, filter, sieve, or flap has a thickness of 1-5 mm.

Claim 53. (previously presented) The method of claim 36, wherein said porous barrier, filter, or sieve has a pore size of 20-100 μm .

Claim 54. (previously presented) The method of claim 36, wherein said porous barrier, filter, or sieve has a pore size of 20-30 μm .

Claim 55. (previously presented) The method of claim 36, wherein said porous barrier, filter, sieve, or flap comprise a hydrophobic material or are coated with a hydrophobic material.

Claim 56. (previously presented) The method of claim 36, wherein said cell separation medium comprises a dye, wherein said dye allows said cell separation medium to distinguish from said overlying body fluid by color, and allows localization of an interphase enriched in tumor cells.

Claim 57. (previously presented) The method of claim 36, wherein said body fluid comprises non-tumor cells having telomerase activity and telomerase-positive tumor cells, and wherein said method further comprises forming an interphase enriched in said telomerase-positive tumor cells and depleted from said non-tumor cells having telomerase activity.

Claim 58. (previously presented) The method of claim 36, wherein said body fluid comprises tumor cells and blood stem cells, and wherein said method further comprises

- (a) forming an interphase enriched in said tumor cells and said blood stem cells, and
- (b) enriching or depleting said blood stem cells or said tumor cells.

Claim 59. (previously presented) The method of claim 58, wherein said cell separation medium has a density in the range of from 1.061 to 1.065 g/ml.

- Claim 60. (previously presented) The method of claim 58, wherein said cell separation medium has a density of about 1.062 g/ml.
- Claim 61. (previously presented) The method of claim 58, further comprising separating said tumor cells from said blood stem cells.
- Claim 62. (previously presented) The method of claim 58, further comprising separating said tumor cells from said blood stem cells by immunoadsorption.
- Claim 63. (previously presented) The method of claim 58, wherein said body fluid is selected from the group consisting of bone marrow and peripheral blood.
- Claim 64. (currently amended) A kit for the separation of tumor cells from a body fluid, comprising a cell separation medium which has a density in the range of from 1.059 to 1.061 g/ml and a centrifugation vessel which is divided into an upper and a lower compartment and said compartments are divided by a porous barrier, a sieve or a flap, wherein said flap is a disk that bends by centrifugation on two sides across a transverse strut.
- Claim 65. (cancelled).
- Claim 66. (cancelled).
- Claim 67. (previously presented) The kit of claim 64, wherein said cell separation medium has a density of about 1.060 g/ml.
- Claim 68. (cancelled).
- Claim 69. (cancelled).
- Claim 70. (cancelled).
- Claim 71. (cancelled).
- Claim 72. (currently amended) The kit of claim ~~71~~ 64, wherein said porous barrier, filter, sieve, or flap has a thickness of 0.5-10 mm.

Claim 73. (currently amended) The kit of claim ~~74~~ 64, wherein said porous barrier, filter, sieve, or flap has a thickness of about 1-5 mm.

Claim 74. (currently amended) The kit of claim ~~74~~ 64, wherein said porous barrier, filter, or sieve has a pore size of 20-100 μm .

Claim 75. (currently amended) The kit of claim ~~74~~ 64, wherein said porous barrier, filter, or sieve has a pore size of 20-30 μm .

Claim 76. (cancelled).

Claim 77. (currently amended) A centrifugation vessel comprising an upper and lower compartment, wherein the upper and lower compartments are divided by a flap and wherein said vessel contains a cell separation medium having a density in the range from 1.055 to 1.065 g/ml, and wherein said vessel flap ~~comprises an outer edge and said flap opens into said lower compartment from the outer edge~~ is a disk that is bent by centrifugation on two sides across a transverse strut.

Claim 78. (previously presented) A centrifugation vessel as claimed in claim 77, wherein the flap is closed in the state when the centrifugation vessel is at rest and is opened during centrifugation.

Claim 79. (previously presented) A centrifugation vessel as claimed in claim 78, wherein the flap is open by centrifugal force during centrifugation.

Claim 80. (previously presented) The centrifugation vessel as claimed 77, wherein the flap has a higher density than a separation medium introduced into the lower compartment.

Claim 81. (previously presented) The centrifugation vessel as claimed 77, wherein the flap has a thickness of 0.5-10 mm.

Claim 82. (previously presented) The centrifugation vessel as claimed 77, wherein the flap has a thickness of 1-5 mm.

Claim 83. (previously presented) The centrifugation vessel as claimed in claim 77, wherein the flap is rigidly connected to the centrifugation vessel.

Claim 84. (previously presented) The centrifugation vessel as claimed in claim 77, wherein the flap forms a base of the upper compartment.

Claim 85. (previously presented) The centrifugation vessel as claimed in claim 77, wherein the vessel comprises an insert wherein the flap forms the base of the insert.

Claims 86-87. (cancelled).